

ISSN (ONLINE) : 2045-8711

ISSN (PRINT) : 2045-869X

INTERNATIONAL JOURNAL OF INNOVATIVE TECHNOLOGY & CREATIVE ENGINEERING

January 2023

Vol - 13 No - 1

@IJITCE Publication

UK: Managing Editor

International Journal of Innovative Technology and Creative Engineering
1a park lane,
Cranford
London
TW59WA
UK

USA: Editor

International Journal of Innovative Technology and Creative Engineering
Dr. Arumugam
Department of Chemistry
University of Georgia
GA-30602, USA.

India: Editor

International Journal of Innovative Technology & Creative Engineering
36/4 12th Avenue,
1st cross St,
Vaigai Colony
Ashok Nagar
Chennai, India 600083

Email: editor@ijitce.co.uk

www.ijitce.co.uk

IJITCE PUBLICATION

International Journal of Innovative Technology & Creative Engineering

Vol.13 No.01

January 2023



www.ijitce.co.uk

Dear Researcher,

Greetings!

Articles in this issue discusses about study endeavours to recent trends in E-Banking.

We look forward many more new technologies in the next month.

Thanks,
Editorial Team
IJITCE

Editorial Members

Dr. Chee Kyun Ng Ph.D

Department of Computer and Communication Systems,
Faculty of Engineering,Universiti Putra Malaysia,UPMSerdang, 43400 Selangor,Malaysia.

Dr. Simon SEE Ph.D

Chief Technologist and Technical Director at Oracle Corporation, Associate Professor (Adjunct) at Nanyang Technological University
Professor (Adjunct) at ShanghaiJiaotong University, 27 West Coast Rise #08-12,Singapore 127470

Dr. sc.agr. Horst Juergen SCHWARTZ Ph.D,

Humboldt-University of Berlin,Faculty of Agriculture and Horticulture,Asternplatz 2a, D-12203 Berlin,Germany

Dr. Marco L. BianchiniPh.D

Italian National Research Council; IBAF-CNR,Via Salaria km 29.300, 00015 MonterotondoScalo (RM),Italy

Dr. NijadKabbara Ph.D

Marine Research Centre / Remote Sensing Centre/ National Council for Scientific Research,
P. O. Box: 189 Jounieh,Lebanon

Dr. Aaron Solomon Ph.D

Department of Computer Science,
National Chi Nan University,No. 303, University Road,Puli Town, Nantou County 54561,Taiwan

Dr. Arthanariee. A. M M.Sc.,M.Phil.,M.S.,Ph.D

Director - Bharathidasan School of Computer Applications, Ellispettai, Erode, Tamil Nadu,India

Dr. Takaharu KAMEOKA, Ph.D

Professor, Laboratory of Food,
Environmental & Cultural Informatics Division of Sustainable Resource Sciences,
Graduate School of Bioresources,Mie University, 1577 Kurimamachiya-cho, Tsu, Mie, 514-8507, Japan

Dr. M. Sivakumar M.C.A.,ITIL.,PRINCE2.,ISTQB.,OCP.,ICP. Ph.D.

Technology Architect, Healthcare and Insurance Industry, Chicago, USA

Dr. Bulent AcmaPh.D

Anadolu University,
Department of Economics,Unit of Southeastern Anatolia Project(GAP),26470 Eskisehir,TURKEY

Dr. Selvanathan Arumugam Ph.D

Research Scientist, Department of Chemistry, University of Georgia, GA-30602,USA.

Dr. S.Prasath Ph.D

Assistant Professor, School of Computer Science, VET Institute of Arts & Science (Co-Edu) College, Erode, Tamil Nadu, India

Dr. P.Periyasamy, M.C.A.,M.Phil.,Ph.D.

Associate Professor, Department of Computer Science and Applications, SRM Trichy Arts and Science College, SRM Nagar, Trichy - Chennai
Highway, Near Samayapuram, Trichy - 621 105,

Mr. V N Prem Anand

Secretary, Cyber Society of India

Review Board Members

Dr. Rajaram Venkataraman

Chief Executive Officer, Vel Tech TBI || Convener, FICCI TN State Technology Panel || Founder, Navya Insights || President, SPIN Chennai

Dr. Paul Koltun

Senior Research Scientist LCA and Industrial Ecology Group, Metallic & Ceramic Materials, CSIRO Process Science & Engineering Private Bag 33, Clayton South MDC 3169, Gate 5 Normanby Rd., Clayton Vic. 3168, Australia

Dr. Zhiming Yang MD., Ph. D.

Department of Radiation Oncology and Molecular Radiation Science, 1550 Orleans Street Rm 441, Baltimore MD, 21231, USA

Dr. Jifeng Wang

Department of Mechanical Science and Engineering, University of Illinois at Urbana-Champaign Urbana, Illinois, 61801, USA

Dr. Giuseppe Baldacchini

ENEA - Frascati Research Center, Via Enrico Fermi 45 - P.O. Box 65, 00044 Frascati, Roma, ITALY.

Dr. Mutamed Turki Nayef Khatib

Assistant Professor of Telecommunication Engineering, Head of Telecommunication Engineering Department, Palestine Technical University (Kadoorie), TulKarm, PALESTINE.

Dr. P. Uma Maheswari

Prof & Head, Department of CSE/IT, INFO Institute of Engineering, Coimbatore.

Dr. T. Christopher, Ph.D.,

Assistant Professor & Head, Department of Computer Science, Government Arts College (Autonomous), Udumalpet, India.

Dr. T. DEVI Ph.D. Engg. (Warwick, UK),

Head, Department of Computer Applications, Bharathiar University, Coimbatore-641 046, India.

Dr. Renato J. Orsato

Professor at FGV-EAESP, Getulio Vargas Foundation, São Paulo Business School, Rualtapeva, 474 (8° andar), 01332-000, São Paulo (SP), Brazil
Visiting Scholar at INSEAD, INSEAD Social Innovation Centre, Boulevard de Constance, 77305 Fontainebleau - France

Y. Benal Yurtlu

Assist. Prof. Ondokuz Mayıs University

Dr. Sumeer Gul

Assistant Professor, Department of Library and Information Science, University of Kashmir, India

Dr. Chutima Boonthum-Denecke, Ph.D

Department of Computer Science, Science & Technology Bldg., Rm 120, Hampton University, Hampton, VA 23688

Dr. Renato J. Orsato

Professor at FGV-EAESP, Getulio Vargas Foundation, São Paulo Business School Rualtapeva, 474 (8° andar), 01332-000, São Paulo (SP), Brazil

Dr. Lucy M. Brown, Ph.D.

Texas State University, 601 University Drive, School of Journalism and Mass Communication, OM330B, San Marcos, TX 78666

Javad Robati

Crop Production Department, University of Maragheh, Golshahr, Maragheh, Iran

Vineth Sukumar (PhD, MBA)

Product Engineering Segment Manager, Imaging Products, Aptina Imaging Inc.

Dr. Binod Kumar PhD(CS), M.Phil.(CS), MIAENG, MIEEE

Professor, JSPM's Rajarshi Shahu College of Engineering, MCA Dept., Pune, India.

Dr. S. B. Warkad

Associate Professor, Department of Electrical Engineering, Priyadarshini College of Engineering, Nagpur, India

Dr. doc. Ing. Rostislav Choteborský, Ph.D.

Katedra materiálu a strojírenské technologie Technická fakulta, Česká zemědělská univerzita v Praze, Kamýcká 129, Praha 6, 165 21

Dr. Paul Koltun

Senior Research Scientist LCA and Industrial Ecology Group, Metallic & Ceramic Materials, CSIRO Process Science & Engineering Private Bag 33, Clayton South MDC 3169, Gate 5 Normanby Rd., Clayton Vic. 3168

DR. Chutima Boonthum-Denecke, Ph.D

Department of Computer Science, Science & Technology Bldg., Hampton University, Hampton, VA 23688

Mr. Abhishek Taneja B.sc(Electronics), M.B.E, M.C.A., M.Phil.,

Assistant Professor in the Department of Computer Science & Applications, at Dronacharya Institute of Management and Technology, Kurukshetra. (India).

Dr. Ing. Rostislav Chotěborský, ph.d,

Katedra materiálu a strojírenské technologie, Technická fakulta, Česká zemědělská univerzita v Praze, Kamýcká 129, Praha 6, 165 21

Dr. Amala Vijaya Selvi Rajan, B.sc, Ph.d,

Faculty – Information Technology Dubai Women's College – Higher Colleges of Technology, P.O. Box – 16062, Dubai, UAE

Naik Nitin Ashokrao B.sc, M.Sc

Lecturer in Yeshwant Mahavidyalaya Nanded University

Dr. A. Kathirvell, B.E, M.E, Ph.D, MISTE, MIACSIT, MENG

Professor - Department of Computer Science and Engineering, Tagore Engineering College, Chennai

Dr. H. S. Fadewar B.sc, M.sc, M.Phil., ph.d, PGDBM, B.Ed.

Associate Professor - Sinhgad Institute of Management & Computer Application, Mumbai-Bangalore Western Express Way Narhe, Pune - 41

Dr. David Batten

Leader, Algal Pre-Feasibility Study, Transport Technologies and Sustainable Fuels, CSIRO Energy Transformed Flagship Private Bag 1, Aspendale, Vic. 3195, AUSTRALIA

Dr R C Panda

(M.Tech & PhD (IITM); Ex-Faculty (Curtin Univ Tech, Perth, Australia)) Scientist CLRI (CSIR), Adyar, Chennai - 600 020, India

Miss Jing He

PH.D. Candidate of Georgia State University, 1450 Willow Lake Dr. NE, Atlanta, GA, 30329

Jeremiah Neubert

Assistant Professor, Mechanical Engineering, University of North Dakota

Hui Shen

Mechanical Engineering Dept, Ohio Northern Univ.

Dr. Xiangfa Wu, Ph.D.

Assistant Professor / Mechanical Engineering, NORTH DAKOTA STATE UNIVERSITY

Seraphin Chally Abou

Professor, Mechanical & Industrial Engineering Department, MEHS Program, 235 Voss-Kovach Hall, 1305 Ordean Court, Duluth, Minnesota 55812-3042

Dr. Qiang Cheng, Ph.D.

Assistant Professor, Computer Science Department Southern Illinois University Carbondale Faner Hall, Room 2140-Mail Code 45111000 Faner Drive, Carbondale, IL 62901

Dr. Carlos Barrios, PhD

Assistant Professor of Architecture, School of Architecture and Planning, The Catholic University of America

Y. Benal Yurtlu

Assist. Prof. Ondokuz Mayıs University

Dr. Lucy M. Brown, Ph.D.

Texas State University, 601 University Drive, School of Journalism and Mass Communication, OM330B, San Marcos, TX 78666

Dr. Paul Koltun

Senior Research Scientist LCA and Industrial Ecology Group, Metallic & Ceramic Materials CSIRO Process Science & Engineering

Dr. Sumeer Gul

Assistant Professor, Department of Library and Information Science, University of Kashmir, India

Dr. Chutima Boonthum-Denecke, Ph.D

Department of Computer Science, Science & Technology Bldg., Rm 120, Hampton University, Hampton, VA 23688

Dr. Renato J. Orsato

Professor at FGV-EAESP, Getulio Vargas Foundation, São Paulo Business School, Rualtapeva, 474 (8º andar) 01332-000, São Paulo (SP), Brazil

Dr. Wael M. G. Ibrahim

Department Head-Electronics Engineering Technology Dept. School of Engineering Technology ECPI College of Technology 5501 Greenwich Road - Suite 100, Virginia Beach, VA 23462

Dr. Messaoud Jake Bahoura

Associate Professor-Engineering Department and Center for Materials Research Norfolk State University, 700 Park avenue, Norfolk, VA 23504

Dr. V. P. Eswaramurthy M.C.A., M.Phil., Ph.D.,

Assistant Professor of Computer Science, Government Arts College (Autonomous), Salem-636 007, India.

Dr. P. Kamakkannan, M.C.A., Ph.D.,

Assistant Professor of Computer Science, Government Arts College (Autonomous), Salem-636 007, India.

Dr. V. Karthikeyani Ph.D.,

Assistant Professor of Computer Science, Government Arts College (Autonomous), Salem-636 008, India.

Dr. K. Thangadurai Ph.D.,

Assistant Professor, Department of Computer Science, Government Arts College (Autonomous), Karur - 639 005, India.

Dr. N. Maheswari Ph.D.,

Assistant Professor, Department of MCA, Faculty of Engineering and Technology, SRM University, Kattangulathur, Kanchipuram Dt - 603 203, India.

Mr. Md. Musfique Anwar B.Sc (Engg.)

Lecturer, Computer Science & Engineering Department, Jahangirnagar University, Savar, Dhaka, Bangladesh.

Mrs. Smitha Ramachandran M.Sc (CS),

SAP Analyst, Akzonobel, Slough, United Kingdom.

Dr. V. Vallimayil Ph.D.,

Director, Department of MCA, Vivekanandha Business School For Women, Elayampalayam, Tiruchengode - 637 205, India.

Mr. M. Moorthi M.C.A., M.Phil.,

Assistant Professor, Department of computer Applications, Kongu Arts and Science College, India

Prema Selvaraj Bsc, M.C.A, M.Phil

Assistant Professor, Department of Computer Science, KSR College of Arts and Science, Tiruchengode

Mr. G. Rajendran M.C.A., M.Phil., N.E.T., PGDBM., PGDBF.,

Assistant Professor, Department of Computer Science, Government Arts College, Salem, India.

Dr. Pradeep H Pendse B.E., M.M.S., Ph.D

Dean - IT, Welingkar Institute of Management Development and Research, Mumbai, India

Muhammad Javed

Centre for Next Generation Localisation, School of Computing, Dublin City University, Dublin 9, Ireland

Dr. G. GOBI

Assistant Professor-Department of Physics, Government Arts College, Salem - 636 007

Dr. S. Senthilkumar

Post Doctoral Research Fellow, (Mathematics and Computer Science & Applications), Universiti Sains Malaysia, School of Mathematical Sciences, Pulau Pinang-11800, [PENANG], MALAYSIA.

Manoj Sharma

Associate Professor Deptt. of ECE, Prannath Parnami Institute of Management & Technology, Hissar, Haryana, India

RAMKUMAR JAGANATHAN

Asst-Professor, Dept of Computer Science, V.L.B Janakiammal college of Arts & Science, Coimbatore, Tamilnadu, India

Dr. S. B. Warkad

Assoc. Professor, Priyadarshini College of Engineering, Nagpur, Maharashtra State, India

Dr. Saurabh Pal

Associate Professor, UNS Institute of Engg. & Tech., VBS Purvanchal University, Jaunpur, India

Manimala

Assistant Professor, Department of Applied Electronics and Instrumentation, St Joseph's College of Engineering & Technology, Choondacherry Post, Kottayam Dt. Kerala -686579

Dr. Qazi S. M. Zia-ul-Haque

Control Engineer Synchrotron-light for Experimental Sciences and Applications in the Middle East (SESAME), P. O. Box 7, Allan 19252, Jordan

Dr. A. Subramani, M.C.A., M.Phil., Ph.D.

Professor, Department of Computer Applications, K.S.R. College of Engineering, Tiruchengode - 637215

Dr. Seraphin Chally Abou

Professor, Mechanical & Industrial Engineering Depart. MEHS Program, 235 Voss-Kovach Hall, 1305 Ordean Court Duluth, Minnesota 55812-3042

Dr. K. Kousalya

Professor, Department of CSE, Kongu Engineering College, Perundurai-638 052

Dr. (Mrs.) R. Uma Rani

Asso.Prof., Department of Computer Science, Sri Sarada College For Women, Salem-16, Tamil Nadu, India.

MOHAMMAD YAZDANI-ASRAMI

Electrical and Computer Engineering Department, Babol "Noshirvani" University of Technology, Iran.

Dr. Kulasekharan, N, Ph.D

Technical Lead - CFD, GE Appliances and Lighting,
GE India, John F Welch Technology Center, Plot # 122, EPIP, Phase 2, Whitefield Road, Bangalore – 560066, India.

Dr. Manjeet Bansal

Dean (Post Graduate), Department of Civil Engineering, Punjab Technical University, Giani Zail Singh Campus, Bathinda -151001 (Punjab), INDIA

Dr. Oliver Jukić

Vice Dean for education, Virovitica College, Matije Gupca 78, 33000 Virovitica, Croatia

Dr. Lori A. Wolff, Ph.D., J.D.

Professor of Leadership and Counselor Education, The University of Mississippi, Department of Leadership and Counselor Education, 139 Guyton University, MS 38677

Contents

A STUDY ON INNOVATIONS IN E- BANKING [1152]
--------------------------------------	--------------

A STUDY ON INNOVATIONS IN E- BANKING

Dr.L.Santhi¹

*Assistant Professor, School of Commerce,
VET Institute of Arts and Science (Co-Edu) College, Erode, Tamil Nadu, India.*

Dr.S.Palaniammal²

*Associate Professor, School of Commerce,
VET Institute of Arts and Science (Co-Edu) College, Erode, Tamil Nadu, India.*

Dr.P.Murali³

*Associate Professor, School of Commerce,
VET Institute of Arts and Science (Co-Edu) College, Erode, Tamil Nadu, India.*

Abstract - This study endeavours to Recent trends in E-Banking while investigating to know the current scenario of Internet banking / E- banking services, to know the current financial innovations in E- banking Indian banking sector ,to know the initiatives taken by the government of India for developing the internet banking and to know the challenges in E-banking. The banking industry has seen many technological changes in the last years which has shaped it from manually intensive industry into one that is technologically dependent. Alternatives to traditional branch banking have attracted increasing attention as internet usage started to spread over the markets. Banks started to use the internet for providing new services to their customers. Internet banking system allows individuals to perform banking activities at home via internet. Most of the internet banks are traditional banks which also offer online banking while others are online only and have no physical offices. Internet banking transaction states that customers use the internet to get access to their personal or business bank accounts online anytime and to undertake banking transactions through the use of banks website without inconvenience. Internet banking allows customers to do their banking transactions anytime and providing continuous control over their accounts.

KEYWORDS: *Bank, Customer, industry*

1. INTRODUCTION

Information technology has been one of the powerful tools in the changes that have occurred in trade and economy. It is the use of computer hardware and computer software to store, convert, and process, retrieve, transmit and protect information. Technology has become more accessible, cheaper and easier to use, which has

had a major impact on the world's trade and commerce. With the introduction of the Internet and the World Wide Web companies recognized IT as a tool to do business while consumers acknowledged it as not only an opportunity to purchase goods over the internet and services but also to obtain information. (Aronsohn et al, 2006). It has also changed the way of doing banking transaction. It creates new products, service market opportunities and better service output. Technology adoption by the banks has enabled the use of different technology tools in banking, which enable bank to reduce transaction cost, saving money and also save more time. It categorized as an electronic banking (Wandaogou, Abdil Mumuni Moro and Jalulah ,Stephen Pambiin ,2011).

Objectives of the Study

1. To know the current scenario of Internet banking / E- banking services
2. To know the current financial innovations in E- banking Indian banking sector
3. To know the initiatives taken by the government of India for developing the internet banking
4. To know the challenges in E-banking

Importance and Scope of the Study

The pace of development for Indian banking Industry has been incredible over the past decade and the future growth of India's banking sector will stay high. India's financial services sector will take enchantment in generally strong growth during coming years, ambitious by rising personal incomes, corporate restructuring, financial sector liberalization and the growth of a more consumer-oriented, credit-oriented culture. The banks were finding it hard to compete with the international banks in terms of the customer service without the use of the information technology and computers. The use of the modern

innovation and computerization of the banking sector depends upon the customer satisfaction.

Statement of the Problems

After demonetization the E-banking becomes an essential component to "improve economic growth" Now Banks of India recently implemented cashless withdrawal service. On the other hand Banks are facilitating their services through E-banking and help to educate their clients to use cashless transactions. All banks compete with each other to attract their customer in different ways through convenient, accessible and acceptable services or and products to their customer. Due to rapid change in technology and the entry of private and foreign banks a number of new products and delivery channels have been introduced that the significance influenced in this research based on selected private bank's E-banking services.

Sources of Data

- Secondary data

Secondary data was collected from the sources like company website, other websites, books, journals, articles, magazines, Newspapers etc.,

2. REVIEW OF LITERATURE

Amin Hanudin (2007) studied technology acceptance on internet banking among undergraduate students in Malaysia based on modified version of Technology Acceptance Model (TAM) and developed a technology acceptance model for internet banking. The result suggested that perceived usefulness (PU), perceived ease of use (PEOU) and perceived credibility (PC) had significant relationship with behavioral intention. Further these measures are good determinant for undergraduate acceptance for internet banking. Results also suggested that PU and PEOU had a significant relationship with computer self-efficacy (CSE). The study is useful in providing the understanding of the TAM among undergraduate from Malaysians" perspective.

Jadhav, Poonam R. Lohana and Rupesh Dargad (2010) Conducted a "Customer Perception and Attitude Towards E-Banking". Information technology is considered as a key driver for the changes taking place around the world. Electronic banking is the most inventive service offered by the banks. The transformation from traditional banking to e-banking has been a dramatic change. The evolution of e-banking started from the use of Automatic teller Machines and telephone banking

(ATM), direct bill payment, electronic fund transfer (EFT) and the revolutionary online banking.

Ramanigopal (2011) the study focused on "customer perception towards internet banking services with special reference to Erode District" Banks today know better than anyone the opportunities and the risks they face in an ever changing competitive environment. In offering e-commerce products, banks some key advantage over potential competitors „commerce would create opportunities for banks to strengthen their relationships with customers, sell additional services, and prevent encroachment on their business activities. Finally, this study concludes on core banking is the services provided by a group of networked bank branches.

3. INNOVATIONS IN E- BANKING

3.1 CURRENT SCENARIO OF INTERNET BANKING / E- BANKING SERVICES

In entire Indian banking system, Electronic Banking has turn emerged as an important part. The concept of e- banking is off to some extent latest origin in India. Traditional model of banking i.e., branch-based banking was widespread till 1990s, and after that non-branch banking services began. IT Act, 2000, was created by government of India with effect from the 17th October 2000. A Committee was laid down to study various aspects of Internet banking. The committee had paid enough consideration on three most important areas of Internet banking, Security issues, legal issues and regulatory issues. Recommendations and guiding principles of working committee was acknowledged by Reserve Bank of India and accordingly plans were issued to banks to employ internet banking in India

Table exhibit a few facts related to electronic banking with respect to its present scenario. Table shows evidence for ATM, POS (Point of sale) and electronic cards (credit and debit cards) sited and sanctioned by the schedule commercial banks (SCBs) in India as on December 2014. Escalating number of mobile banking users in India were also being shown in the table.

Need and Benefits of E-Banking

Banking has witnessed many innovations in last 3 decade and one of the major among it is e- banking which was result of information and technological revolution. These IT revolutions changed the entire working of banking sector as e-banking gave birth to new type of financial services which was created by the intersection of tradition

retail financial services with the internet. E-banking provides provision of performing basic banking services or transaction through web. These services include, Checking and savings accounts, Consumer loans and mortgage financing, Credit and debit cards.

3.2 CURRENT FINANCIAL INNOVATIONS IN E-BANKING INDIAN BANKING SECTOR

Introduction of innovation in banking sector gave birth to new product design, various methods of doing online financial transaction and different electronic systems. All this gave a most popular name to today's banking system which is Innovative banking. Innovation banking mainly stresses on customer convenience and customer satisfaction. The main reason behind bringing innovation in current banking system was to provide customer with better services with help of technology and in this race of technology development internet served as the foundation stone for innovation banking. As after the introduction of internet in banking sector a drastic change were observed like higher efficiency, control of operations, reduction in cost because of replacement of paper based and labor intensive methods by automated processes lead to higher productivity and profitability. The need of innovations in Financial sector was felt due to the various challenges that were prevailing in the traditional banking system and after the introduction of innovation in banking products and services these challenges were overcome and this entirely changed the banking philosophy. Following is the list various innovation that took place in E-Banking

- Automated Teller Machines (ATM)
- Tele Banking
- The various types of financial transactions which customers may transact through their telephone banking are:-
 - obtaining account balances
 - list of latest transactions
- Electronic bill payments
- Funds transfers between a customer or even in another's accounts.
- Smart Card
- Debit Card
- cheque
- Direct Deposit
- Electronic Bill Payment
- Electronic Check Conversion, Cash Value Stored

3.3 INITIATIVES TAKEN BY THE GOVERNMENT OF INDIA FOR DEVELOPING THE INTERNET BANKING

With the objective of promotion and encouragement of the applications of E-Banking, various initiatives have been taken by RBI and Indian Government

- IT ACT 2000 was conceded by GOI w.e.f. October 17, 2000 which paid attention to give legal recognition to electronic transactions and supplementary means of electronic commerce.
- Constant analysis of E-Banking legal requirements by RBI, so as to further make certain that financial solidity of Nation may not be influenced by E-Banking Challenges.
- Vision Document 2011-17, was framed by Dr. K.C. Chakrabarty Committee including members from IIM, IDBFT, IIT and Reserve, which presents an analytical road map i.e. strategy to enhance the relevance of IT in the banking sector [RBI (2011), IT Vision of Reserve Bank of India 2011-2017]
- Endeavors To Make Payment System more safe and sound By RBI. Banks has been therefore advised to make its safety feature stronger in e-banking. It was being admitted by RBI that applying alternate channels of payments like Mobile Banking, ATMs involves an extra responsibility of Banks to guarantee safe & secure transactions. (RBI Annual Report (2013)).
- RBI allowed National Payments Corporation of India (NPCI) to elevate the number of mobile banking services and increase the IMPS (Immediate Payment Service) channels like ATMs, internet, mobile etc. Besides this, efforts are being made by NPCI to take more mobile network operators with the intention that mobile banking services can be made accessible through a common platform. (RBI Annual Report (2013)).
- The Basel Committee on Banking Supervisions (2001) has enlightened risk management principles for electronic banking. They primarily spotlight the extension and tailoring the existing risk-management plan to the electronic banking structure.

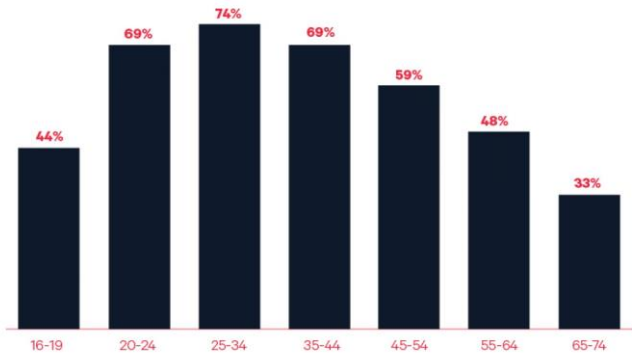
3.4 CHALLENGES IN INTERNET BANKING

The challenges associated to e-banking exist in Indian scenario are discussed below:

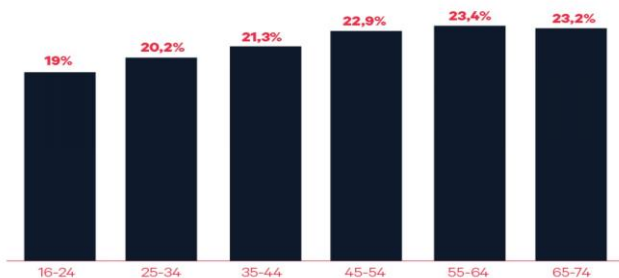
- **Security Risk:** Security issues and other related aspects has become one of the key concerns for Banking sector (Prema C, 2011). Large proportion of customers resists adopting e-banking facilities considering safety and security concerns (Kuisma T, Laukkanen T and Hiltunen M). According to the IAMAI Report (2006), 43% of internet users are still not accepting the use of internet banking in India because of security risks. Therefore, it is a primary challenge for banks to convince the consumers on this aspect, which may further lift up the online banking usage.
 - **Privacy/ Confidentiality risk:** Risk of revelation of not to be disclosed or confidential information & alarm of identity theft is one of the major reasons that restrain the consumers while opting for electronic banking services. This is being believed by large no. of consumers, that by adopting internet banking services, their identity would be at threat. According to the research, (Andrews S and Shen A., 2000) consumers fret related to their privacy in the way that bank may march into their confidentiality by using their information for marketing and other consequential purposes without agreement of consumers.
 - **The Trust Issue:** Trust is the major obstacle to electronic banking for most of the customers. Traditional banking is often used by customers because of lack of conviction in the online bank transactions. They have a mindset that there is a risk in online banking transaction leading to different frauds and scams (Ingle A and Pardeshi R, 2012). While using online banking services by the consumers, there always remains a doubt or question in their minds regarding the successful completion of that transaction till the time a confirmation message is received.
 - **Customer Understanding:** Knowledge or understanding regarding e-banking among consumers about is still at junior side in Indian context. Banks are not able to advertise entire information about the use, benefits and facility of online banking.
- Therefore, one of the most ranked hurdles in the expansion of electronic banking is the less alertness of new technologies among customers. (Karimzadeh M and Alam D, 2012).
- **Less Internet diffusion in India:** The online banking channel has altered over the years. E-Banking use in India has raised from 1% in 2006 to 7% in 2011 while in North America in the year 2011, 60 percent of the times essential transactions in banks were executed through online channels, (Infosys Report, 2012). So, it can be declared that understanding and availability of internet is still a one of the critical confronts that exists in Indian context. According to the report of IAMAI 2006, about 22% of internet users are not aware about how to transfer funds online. Thus, the penetration of internet customer and knowledge related to internet are the major Challenges.
 - **Poor Infrastructure:** Internet Banking needs consistent support of efficient infrastructure for effective implementation and expanded geographical reach. E-Banking has been restrained to expand itself to semi urban and rural areas due to poor Infrastructural facilities in terms of indecent set up, electric connection, poor satellite, internet and broadband connectivity.

THE ROLE OF BANKING IN THE CURRENT SITUATION

However, it is clear that people still require banking services, and even minimal in-branch services, because not all users will immediately transition to digital channels. For example, elderly customers, who are among the most vulnerable to COVID-19, are the least likely to increase their use of online banking. Data on the use of online banking services by age range in Europe shows that among users between 55 and 64 years of age, 48% use online banking, less than half, and among those aged between 65 and 74, the figure is even lower at 33%.



If we look at Spain alone, these figures are lower still: For customers aged 55 to 64, 23.4% use online banking, while the figure is just 23.02% for customers between 65 and 74.



For this segment, messages encouraging the use of online banking will not be enough. These customers will require more resources and support in switching to online banking, as people of this generation are generally less accustomed to using digital channels. Such resources include online tutorials and those with telephone support, as well as increasing the remote support options available to resolve doubts and queries. In any event, and although the increase in the adoption of online banking services is being driven by the pandemic and the health restrictions in place as a result, it could bring about positive change in the medium and long term. For example, with the improved security and usability of digital channels to facilitate access to banking services for certain user segments. Only time and data will tell.

4. Conclusion

Government of India in synchronization with many public banks & financial Institutions are making an attempt to create an E-banking which is more safe, reliable and protected. This paper also highlights the opportunities that are available in India for the development of e- banking. Key opportunities can stated in terms of untapped rural markets, competitive advantage held to Banks, increasing internet users, efforts initiated by

government of India, etc. In contrast to overseas banks, online services presented by domestic banks still have an extended way to move. One fact to be admitted is that supportive and efficient infrastructure can make Indian Banks reach masses. This paper fundamentally analyses and presents the sketch of E-Banking in India. Studies in the past have discovered that Internet Banking is accepted by Indian consumers but the growth would certainly take time. In this context, advance studies may be conducted to examine the various forces which direct the consumer intend to take up internet banking services.

References

- [1] Srivastava, R. K. (2007). Customers perception on usage of internet banking. *Innovative Marketing*, 3(4), 67-73.
- [2] Haq, S., Khan, M. (2013). E-banking challenges and opportunities in the Indian banking sector. *Innovative Journal of Business and Management*, 2(4), 56-59.
- [3] Gupta, P., Mishra, C. M. (2012). E-banking-New emerging trends in Indian banking industry. *Research Journal of Economics and Business Studies*, 1(10), 1-3.
- [4] Basel Committee on Banking Supervision (2001, May), Risk Management Principles for Electronic Banking, Accessed February 26, 2015, <http://www.bis.org/publ/bcbs82.pdf>
- [5] Business Line (2014, Jan 29), India to Have 243 Million Internet Users by June 2014: IAMAI, Accessed January 6, 2015, <http://www.thehindubusinessline.com/economy/india-to-have-243-million-internet-users-by-june-2014-iamai/article5630908.ece>
- [6] Business Standard (2011, July 20), 7% Account Holders in India Use Net Banking: Study, Accessed January 7, 2015, http://www.business-standard.com/article/finance/7-account-holders-in-india-use-net-banking-study-111072000193_1.html.



January 2023
Vol - 13 No - 1
@IJITCE Publication